Infrared Photography Encyclopedia Article

Infrared Photography

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Infrared Photography

Infrared photography, the process of recording images on film by capturing the near-infrared radiation emitted from objects, was invented in 1880 by Sir William Abney (l843-1920). Abney is said to have produced a photograph of a boiling tea kettle by using a special collodion emulsion to capture the near-infrared radiation emitted by the kettle. For years many others were unable to produce the same results. It wasn't until 1903 that the first real infrared sensitizer was discovered, an emulsion known as *Dicyanine*, a chemical containing special dyes that responded to near-infrared radiation, thus producing an image of objects that emitted such radiation.

The problem with the sensitizer and the ones that followed was that the exposure time necessary to produce the image was far too long, making the use of such photography impractical. However, in 1942 Kodak solved this problem by developing an infrared photographic film sensitive enough to make quick exposures. Available in both black-and-white and color, the new film usheredin the age of infrared photography. Since 1942, infrared photography has found a variety of applications. It has been used for observing camouflaged troops and for detecting tumors and other medical ailments. Because infrared radiation is not scattered by atmospheric haze, as is light, infrared photography is used to find distant objects, including those in space. This has not only enabled astronomers to discover stars too dim to be detected visually, but also to determine the temperature and movement of certain planets and stars. Infrared photos are also used in meteorology, farming, criminology, and industry.